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Erratum: Galactic chemical evolution in hierarchical formation models – I. Early-type galaxies in the local Universe

by Matías Arrigoni,^{*} Scott C. Trager, Rachel S. Somerville and Brad K. Gibson

Key words: errata, addenda – galaxies: abundances – galaxies: evolution – galaxies: formation.

The paper ‘Galactic chemical evolution in hierarchical formation models – I. Early-type galaxies in the local Universe’ was published in Mon. Not. R. Astron. Soc. **402**, 173–190 (2010).

The iron yield of Type II supernovae used in the simulations presented in this paper is incorrect. Specifically, when constructing the table of nucleosynthetic yields, we did not account for the contribution of radioactive ^{56}Ni to the Fe yield in stars with $M > 12 M_{\odot}$. We have corrected the values and rerun the models. The qualitative results remain the same, although the calibration of the model is slightly different. There are, however, two minor conclusions that are no longer valid. We had stated (i) that most of the iron in ellipticals comes from SNe Ia, and (ii) that the results do not change when cutting the Fe yield by a factor of 2. Under the corrected SN II Fe yields, neither of those statements holds true. In the first case, by comparing the integrated ejecta we conclude that the contributions

to iron from SNe II and SNe Ia are roughly equal. In the latter case, even when reducing the Fe yield by half for $M > 30 M_{\odot}$ stars there is a small change, and of course if the reduction is for all SN II progenitors there is a significant impact. However, we would like to point out that increasing (or decreasing) the yields by a fixed factor has a minimal effect on the slope of the $[\alpha/\text{Fe}]$ – M^* relation; such a change primarily affects the zero-point. We will show the corrected model, along with a more detailed description of the corrections, in a forthcoming paper on the metal content and abundance ratios of the intracluster medium (Arrigoni, Trager & Somerville 2012).

REFERENCES

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Arrigoni M., Trager S., Somerville R., 2012, MNRAS, submitted

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